COMMENTS
REVISED DRAFT FEASIBILITY STUDY WORK PLAN
REVISED MARCH 2009

No.	General Comments
1	The Feasibility Study (FS) work plan needs to be updated to include information gathered since the signing of the AOC. In particular, Sections 1, 2 and 5 need significant updating. Where appropriate (for example, throughout Section 1), the language should be revised to be consistent with the RARC.
2	Some key elements of the FS are not included in the work plan. These include applicable or relevant and appropriate requirements (ARARs) identification, procedures for the identification of principle threat wastes, and a process for the identification of disposal locations.
3	The FS work plan should include more discussion on the development PRGs and the transition from PRGs to remedial action limits (RALs) or cleanup levels. The concept is treated inconsistently throughout the document and is not clear.
4	The process of going from general response actions (GRAs) to the development of remedial action alternatives should be described more clearly.

No.	Section/ Worksheet No.	Specific Comments
5	Page 1-3, Section 1.2	For the settlement agreement signed on June 23, 2008, Occidental agreed to perform and fund the work, not Tierra. Reference to the RM 10.9 agreement should be added.
6	Page 1-4, Section 1.4	RBTCs should probably not be pulled out as a separate bullet point. On Page 7-2, they are identified as part of the information used to develop PRGs. If the RAL concept is retained, a description of the concept and how they are developed should be included as a separate bullet.
7	Pages 2-1 to 2-2, Section 2.1	Reference to the pathogen survey should be moved to FSP3 and reference to the 2000/2001 creel angler survey should be deleted. Let's discuss the status of all tasks, and whether it makes sense to include a list of approved QAPPs.
8	Page 2-6, Section 2.2.1	Delete the last 3vsentences of this section and replace with: "Empirical data collected will be used to better characterize potential sources of contaminants to the LPR and to refine predictions of future conditions."
9	Page 2-6, Section 2.2.2	The description of the RAO development process in this section is inconsistent with the later discussion of RALs and Target Areas.
10	Page 2-7, Section 2.2.3, Third Paragraph	Update this section to reflect current thinking on groundwater flux measurements.
11	Page 2.8, Section 2.2.6	Information about the RM 10.9 removal needs to be added.

12	Page 2-8, Section 2.2.7, First Paragraph	This section presupposes that the LPRSA will be divided into Target Areas. The identification of target areas should be a stepwise process. The first step in this process should be an evaluation of the site data relative to PRGs based on the results of the risk assessment. These areas may be refined based on a consideration of site specific factors such as sediment bed behavior, adjacent land and water use and the physio-chemical properties of the contaminants. This information, in addition other considerations such as bench-scale tests and/or pilot studies, should be used in the development, screening and detailed evaluation of remedial action alternatives. The criterion that should not necessarily be defined as those areas having greatest impact in achieving RAOs.
13	Page 3-1, Section 3.1	1st Bullet: Impact of CSOs/SWOs is overstated. Based on existing data, EPA has found that the CSOs and SWOs are relatively minor contributors of COPCs and COPECs. 3rd Bullet: Delete the phrase at the end of the 3rd bullet, "…that is significant enough to negate the long-term benefit obtained through mass removal via dredging."
14	Page 3-2, Section 3.1	Point 8 either needs to be better explained or removed.
15	Page 3-3, Section 3.2, Number 10	There should be some recognition that there are methods to control short-term releases during dredging (e.g., silt curtains) and that it is not just a tradeoff between short-term impacts and long-term benefits. Short-term risks can be minimized. The costs and effectiveness of controls during remedy implementation must be discussed in the FS.
16	Page 4-1 and 4-2, Section 4.1	a. Contaminants of Concern: EPA's 1999 guidance on the preparation of Record of Decisions (RODs) defines contaminants of concern (COCs) as: "A subset of the contaminants of potential concern (COPCs) that are identified in the RI/FS as needing to be addressed by the response action." COCs should be identified in the FS and should be the focus of the remedy. COPECs should also be referred to. b. The last sentence of the definition of Natural Background should be replaced with the last sentence of the definition of Anthropogenic Background. c. Risk Drivers: This statement should be included in this section: EPA risk assessment policy states that one of the key goals of the risk assessment is to identify the chemicals and pathways that pose the majority of the site risk. d. RALs: RALs was not defined in the EPA 2000 citation (cost guidance), and it is not clear how this term, as well as Cleanup Level, is being used in the FS, or where it is defined as a regulatory term. Further, it is unclear how different remedial actions can affect the RALs. Please clarify. e. ARARs should be defined/described in this section as well. The identification of preliminary ARARs should be included in the work plan as well.
17	Page 4-2, Section 4.3, Second Paragraph, First Sentence	Definition of "Point Concentration" - delete the following text: ", where each value is given equal weight"
18	Page 4-3, Section 4.3	Definition of "RBTCs" – it is unclear how the RBTC will be applied in the FS. A cancer risk of 10^{-6} is the point of departure for evaluating risk.
19	Page 5-1, Section 5.0, Last Sentence	This sentence does not make sense. Section 2.2.2.2 of the CERCLA RI/FS Guidance describes what should be included in the CSM. It is the risk assessment which will determine whether remedial actions are necessary to protect human health and the environment. The potential to achieve protective levels through application of the site remedy will be the focus of the FS.
20	Page 5-1, Section 5.1	Delete the first paragraph of this section, as MPI 2007 is no longer the current CSM.

21	Page 5-1, Section 5.1, First Paragraph	Section 5.1 needs to be updated to reflect our current understanding of the system and the ongoing data needs. The degree to which additional data is needed to support the RI/FS and modeling effort should be an ongoing discussion between the CPG and the agencies with an eye towards how such info will be incorporated in the models, the sensitivity of the model to these parameters, overall project schedule implications, and direct applicability to detailed alternatives scenarios in the FS.
22	Page 5-2, Section 5.1	In the bullet list, reference and background should be referred to in a manner consistent with the RARC.
23	Page 5-3, Section 5.2	Again, the significance of CSOs and SWOs is overstated.
24	Page 5-3, Table 5-1	Either remove this table or update it.
25	Page 6-1, Section 6.1	a. The GRAs outlined below seem to be appropriate. b. Third bullet – MNR, second sentence should be reworded to add: MNR also includes regular monitoring such as the periodic collection and analysis of sediment, fish tissue and surface water samples to ensure... c. Fifth bullet – Containment – Please add the following statement to the end of the paragraph "Capping may also require controls to limit resuspension during cap placement. In addition to an isolation layer, caps may also require an armoring layer to prevent erosion, a habitat layer, and potentially other layers."
26	Page 6-2, Section 6.1	In the last paragraph of this section, what does the word "pending" mean in relation to RAOs?
27	Page 6-2, Section 6.2, First Paragraph	The technologies applicable to each GRA should be identified and screened to eliminate those that cannot be technically implemented at the site. The GRAs are then further defined to focus on a specific technology type. These process options are then screened against effectiveness, implementability and cost. For example, if the GRA is containment, and the specific technology is capping, the process options could be the various types of caps (sand cap, armored cap, amended cap). The various process options are then assembled into a range of remedial action alternatives for evaluation in the FS.
28	Page 6-3, Section 6.2	The existing condition listed may apply to all or a portion of the LPRSA, and the list may include other items. The relevant criteria are technical and administrative feasibility of technologies, not commercial availability. Commercial availability can be a bullet under technical considerations. In the last paragraph, please note that on-site work does not require a permit, although there should be coordination for purposes of permit equivalencies. Adverse impacts to commercial and industrial facilities can be mitigated.
29	Page 7-1, Section 7.1	The reference to RALs in the paragraph after the bullets should be removed. Risk based PRGs will be developed.
30	Page 7-2, Section 7.1, Second Paragraph	a. Remove the text "developed as part of the RAOs and are" from the first sentence. b. The PRG should be protective of all exposure pathways and receptors, as the most conservative value should be used. PRGs should also comply with ARARs for all exposure pathways being addressed as indicated in the first bullet. As such, the PRGs may not specifically require active remediation, but the remedy must comply with chemical-specific ARARs, which is a threshold criterion.

31	Page 7-2, Section 7.1, Fifth Bullet	SWACs are not used to develop PRGs. However, SWACs may be used to determine whether PRGs are exceeded. SWACs must be estimated over a surface area that is appropriate for the receptor of interest. In some cases, this may be a site-wide SWAC. In other cases, it may be averaged over a much smaller area (e.g., one river mile) consistent with the exposure assumptions in the risk assessment. A SWAC may not be appropriate for small home range receptors (e.g., clams).
32	Page 7-2, Section 7.2	In the second sentence of this section "remedial action" should replace "risk management." Potential for natural recovery should not be a bullet point here. First it needs to be determined whether an area needs to be remediated, and a remedy for that area needs to be selected. The remedy for the area could be MNR.
33	Page 7-3, Section 7.2.1	As mentioned previously, we are unclear on how you intend to use the RAL concept. Target areas should be defined by PRGs. This entire section will need to be modified, after our upcoming meeting.
34	Page 7-4, Section 7.2.2	May need to look at the migration of contamination from deeper sediments to shallow sediment through groundwater transport in addition to physical erosion.
35	Page 7-5, Section 7.2.2	In the first sentence of the first full paragraph on this page, RAL should probably be replaced with PRG.
36	Page 7-5, Section 7.2.2, Third Paragraph	It should not be automatically assumed that the deposited material is clean. The recontamination potential evaluation will need to consider the degree to which recontamination occurs as a result of the deposition of contaminated material, and the effect of dilution by cleaner sediment.
37	Page 7-5, Section 7.3, First Paragraph	Somewhere, perhaps as a new section in Section 7.2, there needs to be a discussion of disposal options. Where will the dredged material go? This section should also discuss ex-situ treatment options and beneficial reuse of sediments.
38	Page 7-6, Section 7.3	Point 5 should simply state "Management of identified ongoing sources."
39	Page 7-6, Section 7.3.2, Third Paragraph	Replace the word reduce with manage on the third line so the revised text reads: "to manage the uncertainty of the information used to support critical decisions."
40	Page 8-1, Section 8.0	Under Implementability, replace "in a manner that meets stakeholder expectations with "Coordination with other government entities is also considered."
41	Section 9	This whole section needs to be updated based on 10.9 and other work.
42	Pages 10-1 to 10-2, Section 10.0	Under threshold criteria, the term "as a whole" does not appear in the NCP. Under short term effectiveness, effectiveness and reliability of protective or mitigative measures should be added. The language describing implementability and state and community acceptance should better track the NCP. In addition, ability to access the site should not be referred to.
43	Page 10-2	There are 6 elements for reduction of toxicity in the NCP, not 4.
44	Section 10	We may have additional comments on this section.

45	Page 11-1, Section 11.1	a. Preliminary ARARs should be identified in the FS work plan as should preliminary remedial action objectives (RAOs). The RAO technical memorandum should refine the RAOs and ARARs based on the result of the RI and baseline risk assessments. b. The PRG development process in the RAO should be discussed briefly in this section. c. The meaning of the 5th sentence is unclear, "It is understood that this approval does not preclude…."